

Title (en)
FREQUENCY GRADIENT METASURFACE-BASED FAST BEAM STEERING TRANSMISSION METHOD AND APPARATUS FOR OWC

Title (de)
FREQUENZGRADIENTEN-METAOBERFLÄCHENBASIERTES SCHNELLES STRAHLSTEUERUNGSÜBERTRAGUNGSVERFAHREN UND VORRICHTUNG FÜR OWC

Title (fr)
PROCÉDÉ ET APPAREIL DE TRANSMISSION DE DIRECTION À FAISCEAU RAPIDE BASÉ SUR UNE MÉTASURFACE À GRADIENT DE FRÉQUENCE POUR OWC

Publication
EP 4160944 A4 20240228 (EN)

Application
EP 20938160 A 20200528

Priority
KR 2020006895 W 20200528

Abstract (en)
[origin: EP4160944A1] The present specification provides a method and apparatus, the method being for transmitting a beam, performed by the apparatus, in an optical wireless communication system, and comprising: generating a pulse laser signal; making the pulse laser signal to be incident on a metasurface, wherein the beam is generated on the basis that the pulse laser signal is incident on the metasurface; and transmitting the beam to a reception apparatus, wherein the metasurface is determined on the basis of ω_0 , d , $\Delta\omega$, and N , wherein ω_0 is a value of a center frequency, d is a value of a virtual antenna interval, $\Delta\omega$ is a value of a frequency comb interval, and N is a value related to the number of frequency combs present within a gain bandwidth based on the center frequency.

IPC 8 full level
H04B 10/50 (2013.01); **G02B 1/00** (2006.01); **H04B 10/11** (2013.01); **H04B 10/508** (2013.01)

CPC (source: EP KR US)
G02B 1/002 (2013.01 - EP); **H04B 10/11** (2013.01 - EP KR US); **H04B 10/503** (2013.01 - EP KR US); **H04B 10/508** (2013.01 - KR US); **G02B 5/32** (2013.01 - EP); **G02B 27/0087** (2013.01 - EP); **H04B 10/508** (2013.01 - EP)

Citation (search report)

- [Y] US 2015117808 A1 20150430 - CHEN SHU-LU [TW], et al
- [Y] WO 2016022309 A1 20160211 - NXGEN PARTNERS IP LLC [US]
- See also references of WO 2021241779A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 4160944 A1 20230405; **EP 4160944 A4 20240228**; KR 20230005297 A 20230109; US 2023216592 A1 20230706; WO 2021241779 A1 20211202

DOCDB simple family (application)
EP 20938160 A 20200528; KR 2020006895 W 20200528; KR 20227041387 A 20200528; US 202017928146 A 20200528